

REMARKS

In response to the outstanding Action, Applicant has carefully considered the Examiner's rejection as well as the prior art of record.

Amendments and arguments in support of the claims as presented herewith are provided in order to place the entire application in condition for allowance.

The first characteristic of the present invention is in that a light emitting layer constituting the electroluminescent element is formed by a printing method using an intaglio, and a viscosity of the light emitting layer forming coating solution for forming the light emitting layer is 0.5 cP or more and 500 cP or less. As shown in examples, the above-mentioned viscosity is extremely vital in forming the light emitting layer by a printing method using an intaglio such as a gravure printing or the like. Comparative examples 1 and 2 further prove that an even film for the light emitting layer cannot be obtained in the case of the light emitting layer forming coating solution with a viscosity out of the above-mentioned range is used to form a light emitting layer by a printing method using an intaglio. Therefore, a thin and even light emitting layer can be obtained by a printing method using an intaglio, only when the viscosity of the light emitting layer forming coating solution is in the range mentioned above.

On the other hand, as the Examiner cited, '252 does suggest of forming a light emitting layer by a printing method using an intaglio. However, it does not disclose at all the viscosity of the light emitting layer forming coating solution for an intaglio printing, which is the very first characteristic of the present invention.

Moreover, it should be noted that '711 which the Examiner cited in relation to the viscosity is not for the intaglio printing. It is quite obvious for the Applicant that a suitable viscosity varies depending on printing methods, and since the suitable viscosity of the light emitting layer forming coating solution for an intaglio printing is not disclosed in '711, the present invention is not obvious even in the case of the suitable viscosity of the present invention coincidentally overlaps with that of '711.

The Examiner argues that '252 suggests that viscosity should be chosen to be a suitable one for gravure printing. However, '252 does not disclose the suitable range of viscosity, that is for 0.5 cP or more and 500 cP or less. Whereas the examples of the present invention proved the above-mentioned range of viscosity which can provide a thin and even light emitting layer by using an intaglio painting. In '252 [0011] does indeed describe that gravure inks do not need to be formulated at extremes of viscosity and thereby easier to handle. Nevertheless, in '252, there is no description about the viscosity range of the present invention which was set by a viewpoint of forming a light emitting layer with a thin and even film thickness. Therefore, the present invention is not obvious from '252.

The second characteristic of the present invention is to cover the coated part with a protective material in a form of a film after solidifying all the light emitting layer forming coating solutions printed preliminarily at the time of forming two or more colors of the light emitting layer by printing method, and printing the subsequent light emitting layer forming coating solution. Thereby it becomes possible to form a new light emitting layer without

damaging the preliminarily printed light emitting layer at the time of forming a light emitting layer by the intaglio printing.

On the other hand, the Examiner argues that the present invention is obvious based on the description of the screen printing method in ‘252 and ‘397. However, the amended present invention will cover the coated part with a protective material in a form of a film. Consequently, the present invention is not obvious from the above-references.

Moreover, the Examiner insists that the present invention is obvious from Park et al. (USP 5,053,298, hereinafter ‘298) even when the printing method is limited to the intaglio printing. While ‘298 describes about the color filter, the light emitting layer of the organic EL in the present invention needs to be thin and even in film thickness, therefore requires totally different technical issues. Accordingly, the present invention is not obvious from ‘298.

Consequently, as explained above, by providing the first characteristic of the present invention; to set “a viscosity of the light emitting layer forming coating solution for forming the light emitting layer to be 0.5 cP or more and 500 cP or less”, the present invention solves a unique issue of requiring a thin and even film formation in forming a light emitting layer of the organic EL by the intaglio printing. Moreover, by providing the second characteristic of the present invention; to “cover the coated part with a protective material in a form of a film after solidifying all the light emitting layer forming coating solutions and printing the subsequent light emitting layer forming coating solution”, the present invention solves another unique issue of needing to form a light emitting layer without damaging the preliminarily formed light emitting

layer at the time of forming two or more colors of the light emitting layer by the intaglio printing method. Since none of the references cited by the Examiner describe such issues unique in forming the light emitting layer by the intaglio printing method, there is no such disclosure that clearly states the two characteristics mentioned above. Therefore, the present invention is not obvious from the references.

In accordance with all of the aforesaid amendments and distinguishing and supportive arguments, it is submitted that the claimed invention is patentable. Favorable reconsideration is respectfully requested.

Date: _____

SEYFARTH SHAW LLP
55 East Monroe Street
Suite 4200
Chicago, Illinois 60603-5803
Telephone: (312) 346-8000
Facsimile: (312) 269-8869

Respectfully Submitted,

Timothy J. Keefer, Reg. No. 35,567

CERTIFICATE OF MAILING

I hereby certify that this paper is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date: 5/31/05